

REMARKS

In accordance with the foregoing, claims 1-14 and 17-20 are pending and claims 1-14 and 17 are under consideration.

The Examiner recognizes the fact that Kusano et al. (US 5,616,652) does not disclose polyphenylene ether (PPE). However, apart from PPE, the Examiner still rejects the current claims, explaining that based on the thermoplastic resins disclosed in Kusano et al., such as PP, Nylon 6 and Nylon 66, a person skilled in the art could easily devise the subject invention by combining Kusano et al. and Nakagawa et al. (WO02/0094936) or by combining Kusano et al. and Miyoshi et al. (US2003/0139518) for the purpose of obtaining the effect of Kusano et al. Applicant respectfully disagrees.

Applicant submits that it would not have been obvious to combine Kusano et al. with either of the primary references. Applicant further submits that even if Kusano et al. were combined with the primary references, the present invention would not result.

With regard to the obviousness of the combination, the Examiner previously mentioned that Kusano et al. discloses different thermoplastic resins in combination with the Kusano et al. styrene butadiene copolymer (SBC). The Kusano et al. list of thermoplastic resins is somewhat extensive, but does not include PPE. Because Kusano et al. lists numerous thermoplastic resins, but does not mention PPE, applicant submits that it would not have been obvious to use the Kusano et al. SBC with PPE. That is, if Kusano et al. intended for the SBC to be used with PPE, Kusano et al. would have so stated. There is nothing in Kusano et al. teaching the SBC can be used with any thermoplastic resin.

The Examiner states that it would have been obvious to use the SBC of Kusano et al. in the primary references to obtain benefits such as "improved handling, high capability to absorb softener, and thorough melting upon mixing." However, the Examiner's argument is based on incomplete information. The Examiner cites column 2, lines 5-10 of the reference. This excerpt provides:

It is an object of the present invention to provide microporous crumbs of a hydrogenated block copolymer which absorb a softening agent, a plasticizer and the like uniformly and rapidly, have an excellent handling property and provide kneaded molding compounds free of non-melted matters upon kneading.

Column 2, lines 5-10 does not mention the packed bulk density, which is crucial to the Examiner's argument. For example, Nakagawa et al. already uses SBC, but does not use SBC having a packed bulk density within the claimed range, when fed to an extruder. The benefits

described in column 2, lines 5-10 of Kusano et al. do not relate to any particular property of the SBC.

Column 4, lines 60-63 of Kusano et al. is much more relevant. This excerpt indicates that

If the bulk density of the crumbs is less than 0.18 g/cc, the handling property of the crumbs after the absorption of a softening agent, a plasticizer or the like is poor.

At column 4, Kusano et al. clarifies that the bulk density is only a concern if one is worried about the handling property after the absorption of a softening agent, a plasticizer or the like. On the other hand, the primary references are not concerned with a mixture of SBC and a softening agent, plasticizer or oil. Without a softening agent/plasticizer or oil, the handling property described at column 4 of Kusano et al. is irrelevant.

The Examiner seems to believe that there is a relationship between the handling property described in Kusano et al. and good extruder feeding properties. This is incorrect. The handling property of Kusano et al. relates to SBC crumbs that have absorbed a softening agent/plasticizer/oil.

In accordance with the foregoing, applicants submit that it would not have been obvious to combine Kusano et al. with either of the primary references.

Even if it would have been obvious to combine the references, the present invention would not result. In Kusano et al., it appears that a packed bulk density is only related to the handling property of crumbs after the absorption of a softening agent, a plasticizer, or the like. Since the primary references are not concerned with absorbing a softening agent/plasticizer, both the packed bulk density and the softening agent/plasticizer/oil of Kusano et al. must be incorporated into the primary references. However, the claimed packed bulk density relates to a copolymer fed to an extruder. It is unclear what effect the SBC crumbs of Kusano et al. would have on the primary references if the SBC had absorbed a softening agent/plasticizer or oil. One of ordinary skill in the art could envision that the softening agent or plasticizer would interfere with the primary reference extrusion process. Perhaps the softening agent or plasticizer would detract from the desired properties disclosed in the primary reference.

The claims refer to a packed bulk density of a copolymer that is fed to an extruder. Kusano et al. refers to a bulk density before absorption of a softening agent or a plasticizer. After the softening agent/plasticizer is added (Kusano et al. requires that it be present), one can envision that the packed bulk density would change. Accordingly, even if the softening

agent/plasticizer of Kusano et al. does not interfere with the extrusion processes described in the primary references, the SBC might have a different bulk density.

Returning to the Kusano et al. column 2 excerpt cited by the Examiner, the benefits described therein are not related to any particular SBC property. If one of ordinary skill in the art wanted to achieve the properties described at column 2 of Kusano et al., one of ordinary skill in the art would use the most specific example of Kusano et al. As mentioned before, it appears that Kraton G1651 could have been used with the Kusano et al. process. However, Kraton G1651 has a bulk density of 0.279, outside the claimed range. Kusano et al. only mentions that a bulk density of more than 0.18 g/cc should be used (for improved oil absorption properties). Kusano et al. does not mention any upper limit for the bulk density. On the other hand, the claims recite 0.25 as the upper limit. As described at paragraph [0036] of the application, the upper limit is important to avoid blocking the feeder and to avoid large variations in the physical properties of the resulting product.

In view of the foregoing, applicant submits that any combination of Kusano et al. and the primary references would defeat the product goals of the primary references and/or not meet the claim limitations.

For all of the above reasons, it is submitted that the rejections should be withdrawn. There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.


Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

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By: 
Mark J. Henry
Registration No. 36,162

1201 New York Avenue, N.W., 7th Floor
Washington, D.C. 20005
Telephone: (202) 434-1500
Facsimile: (202) 434-1501